



 **intrauma**<sup>®</sup>

EN





**Intramedullary Nail.**

**iBact** 

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# Intramedullary Nail.

## Indications

### Elos 180, 240:

intended for stabilizing various types of intertrochanteric fractures of the femur

### Elos 300, 340, 360, 380, 400, 420, 440, 460:

intended for fixation of femoral fractures occurring from the base of the femoral neck extending distally to a point approximately 10 cm proximal to the intercondylar notch. Fracture types include basilar neck, intertrochanteric, subtrochanteric fractures and femoral shaft fractures. These femoral fractures may occur as a result of trauma, non-union, malunion, pathological fractures, and impending pathological fractures.

## Contraindications

### Elos 180, 240:

low subtrochanteric, diaphyseal femur, isolated or combined femoral neck fractures.

### Elos 300, 340, 360, 380, 400, 420, 440, 460:

isolated femoral neck fracture or combined with middle third and distal diaphyseal femur fracture.



Elos 180, 240

Elos 300, 340, 360, 380,  
400, 420, 440, 460

# Descriptive Technical sheet.

## MAIN FEATURES OF THE TECHNOLOGY

### iBact Technology – Silver Coating

- Uses silver nanoparticles (AgNPs) known for their broad bactericidal and fungicidal activity.
- Silver has bacteriostatic properties known since ancient times and scientifically demonstrated as early as the late 19th century, with high efficacy and low toxicity
- The BACT coating is applied to medical devices via chemical deposition to reduce the risk of bacterial infections associated with orthopedic and trauma implants.

#### Tests and Results

- **Characterization:** SEM analysis, aging tests, ionic release, and electrochemical tests → no silver ion release after 4 weeks in physiological solution at 37 °C.
- **Microbiological efficacy:** Tests with *Staphylococcus aureus* isolated from sepsis → formation of an inhibition zone around the coated sample, indicating bacteriostatic activity.
- **Biological safety:** Evaluations according to ISO 10993 (cytotoxicity, sensitization, irritation, systemic and subchronic toxicity, genotoxicity, implant tests up to 52 weeks) → certified biocompatibility.
- ICP-OES analysis of organs and serum from test animals → complete absence of silver absorption.

#### Safety: Biological Evaluation

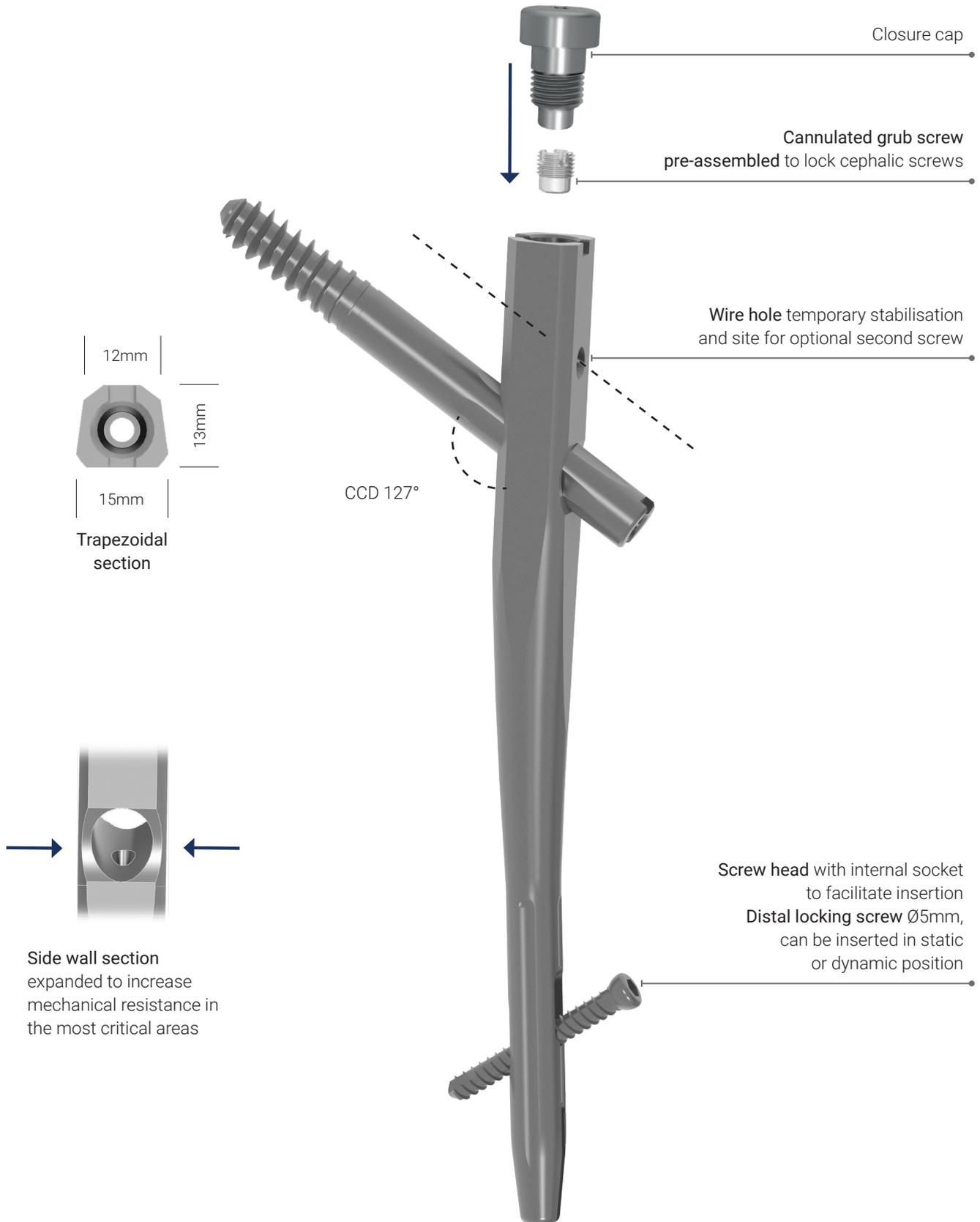
A Biological Evaluation per BS EN ISO 10993:2009 was performed in order to verify and demonstrate the Biocompatibility of the Ag Coating for Implantable Medical Devices.

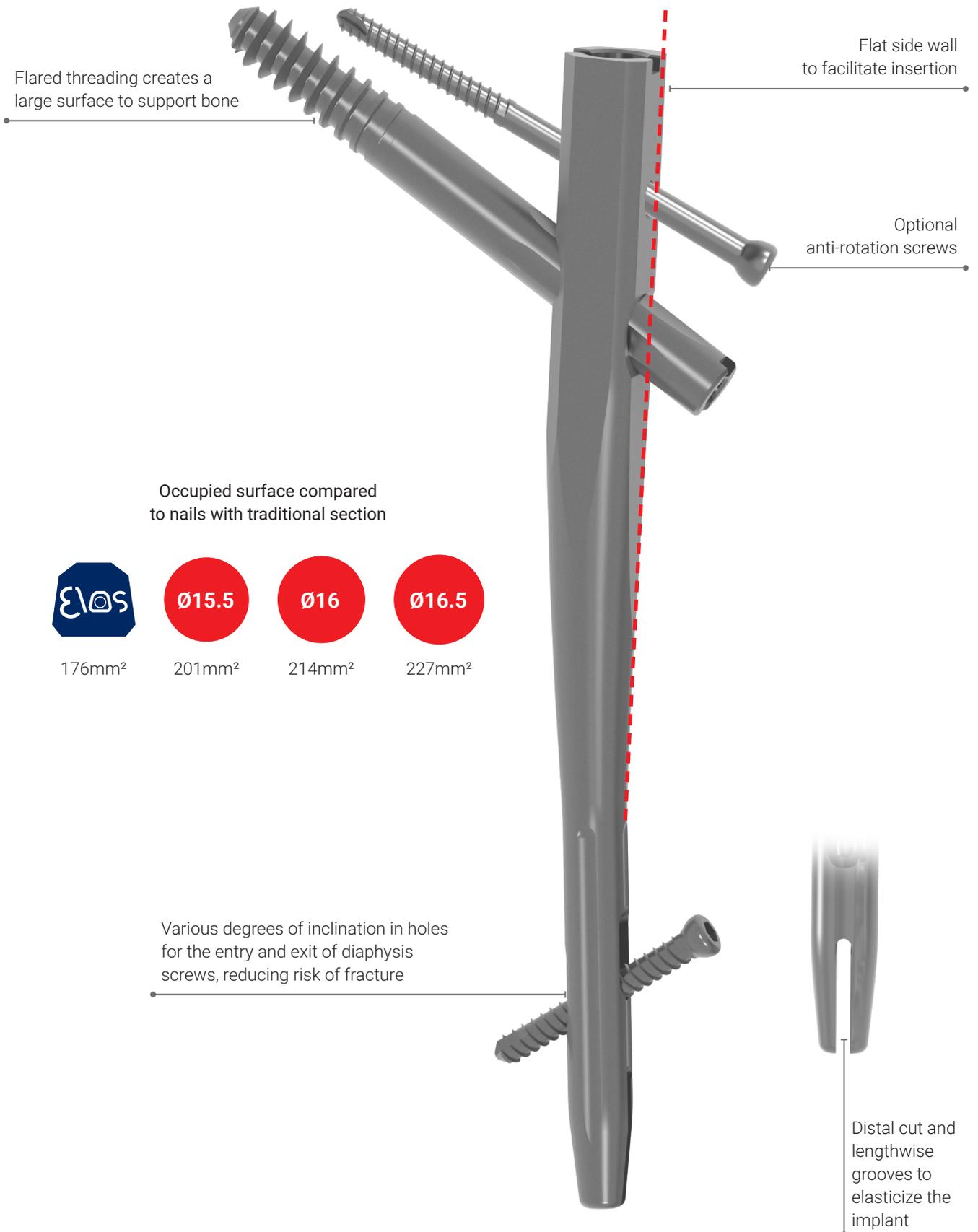
Test	Standard	Pass / Fail
Cytotoxicity	BS EN ISO 10993-5	Pass
Sensitization	BS EN ISO 10993-10	Pass
Irritation or Intracutaneous Reactivity	BS EN ISO 10993-10	Pass
Systemic toxicity	BS EN ISO 10993-11	Pass
Subchronic toxicity	BS EN ISO 10993-11	Pass
Genotoxicity	BS EN ISO 10993-3	Pass
Implantation test at 52 weeks (Istological Evaluation + Evaluation of local and systemic effects on 13 organs)	BS EN ISO 10993-6	Pass
Implantation test at 12 weeks (ICP/OES in serum + 5 organs)	BS EN ISO 10993-6	Pass

#### Advantages

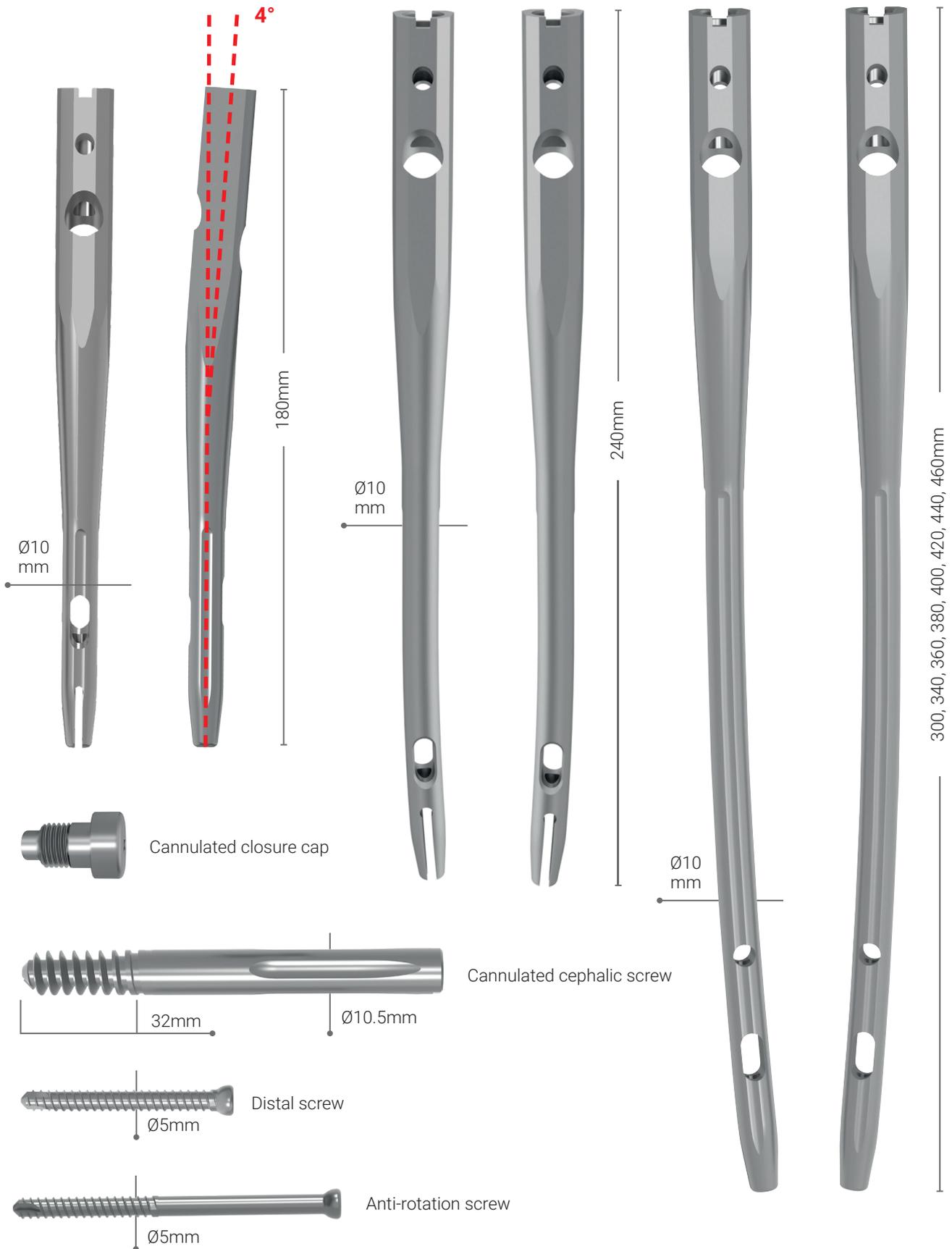
- Passive bacteriostatic protection.
- Biocompatibility for use in implantable medical devices.
- Reduced risk of infections without systemic silver release.
- Applicability to complex geometries while maintaining the efficacy and safety of the medical device.

## / Characteristics





/ Specific implants



**/ SHORT NAILS | Ø10MM | CCD 127°**

	Ref. L	Ref. R	L. mm	CCD
Elos 165	200.1650B		165	127°
Elos 180	200.1800B		180	127°
Elos 240	200.2401B	200.2402B	240	127°

**/ SHORT NAILS | Ø10MM | CCD 122°**

	Ref. L	Ref. R	L. mm	CCD
Elos 165*	200.1652B		165	122°
Elos 180*	200.1802B		180	122°
Elos 240*	200.2403B	200.2404B	240	122°

\* available upon request

**/ SHORT NAILS | Ø11MM | CCD 127°**

	Ref. L	Ref. R	L. mm	CCD
Elos 165*	200.1651B		165	127°
Elos 180*	200.1801B		180	127°
Elos 240*	200.2405B	200.2406B	240	127°

\* available upon request

**/ SHORT NAILS | Ø11MM | CCD 122°**

	Ref. L	Ref. R	L. mm	CCD
Elos 165*	200.1653B		165	122°
Elos 180*	200.1803B		180	122°
Elos 240*	200.2407B	200.2408B	240	122°

\* available upon request



**Material:**

Titanium Ti6Al4V - ISO 5832-3



**/ LONG NAILS | Ø10MM | CCD 127°**

	Ref. L	Ref. R	L. mm	CCD
Elos 300	200.3201B	200.3202B	300	127°
Elos 340	200.3401B	200.3402B	340	127°
Elos 360	200.3601B	200.3602B	360	127°
Elos 380	200.3801B	200.3802B	380	127°
Elos 400	200.4001B	200.4002B	400	127°
Elos 420*	200.4201B	200.4202B	420	127°
Elos 440*	200.4401B	200.4402B	440	127°
Elos 460*	200.4601B	200.4602B	460	127°

\* available upon request

**/ LONG NAILS | Ø10MM | CCD 122°**

	Ref. L	Ref. R	L. mm	CCD
Elos 300*	200.3203B	200.3204B	300	122°
Elos 340*	200.3403B	200.3404B	340	122°
Elos 360*	200.3603B	200.3604B	360	122°
Elos 380*	200.3803B	200.3804B	380	122°
Elos 400*	200.4003B	200.4004B	400	122°
Elos 420*	200.4203B	200.4204B	420	122°
Elos 440*	200.4403B	200.4404B	440	122°
Elos 460*	200.4603B	200.4604B	460	122°

\* available upon request

**/ LONG NAILS | Ø11MM | CCD 127°**

	Ref. L	Ref. R	L. mm	CCD
Elos 300*	200.3205B	200.3206B	300	127°
Elos 340*	200.3405B	200.3406B	340	127°
Elos 360*	200.3605B	200.3606B	360	127°
Elos 380*	200.3805B	200.3806B	380	127°
Elos 400*	200.4005B	200.4006B	400	127°
Elos 420*	200.4205B	200.4206B	420	127°
Elos 440*	200.4405B	200.4406B	440	127°
Elos 460*	200.4605B	200.4606B	460	127°

\* available upon request

**/ LONG NAILS | Ø11MM | CCD 122°**

	Ref. L	Ref. R	L. mm	CCD
Elos 300*	200.3207B	200.3208B	300	122°
Elos 340*	200.3407B	200.3408B	340	122°
Elos 360*	200.3607B	200.3608B	360	122°
Elos 380*	200.3807B	200.3808B	380	122°
Elos 400*	200.4007B	200.4008B	400	122°
Elos 420*	200.4207B	200.4208B	420	122°
Elos 440*	200.4407B	200.4408B	440	122°
Elos 460*	200.4607B	200.4608B	460	122°

\* available upon request



**Material:**

Titanium Ti6Al4V - ISO 5832-3



**/ CANNULATED CEPHALIC SCREW | Ø10.5mm**

Ref.	L. mm
200.1070B	70
200.1075B	75
200.1080B	80
200.1085B	85
200.1090B	90
200.1095B	95
200.1100B	100
200.1105B	105
200.1110B	110
200.1115B	115
200.1120B	120
200.1125B	125
200.1130B	130



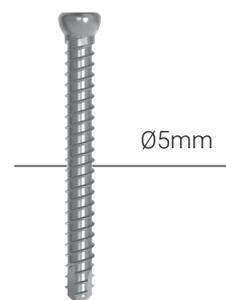
**Material:**

Titanium Ti6Al4V - ISO 5832-3



**/ DIAPHYSEAL SCREW | Ø5mm**

Ref.	L. mm
200.4030B	30
200.4035B	35
200.4040B	40
200.4045B	45
200.4050B	50
200.4055B	55
200.4060B	60
200.4065B	65
200.4070B	70
200.4075B	75
200.4080B	80
200.4085B	85
200.4090B	90
200.4095B	95
200.4100B	100
200.4105B	105



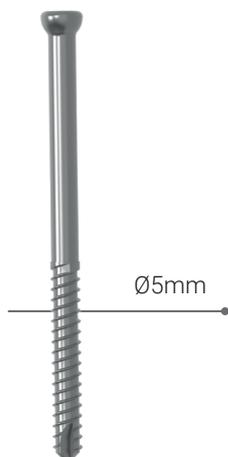
**Material:**

Titanium Ti6Al4V - ISO 5832-3



**/ ANTI-ROTATION SCREW | Ø5mm**

Ref.	L. mm
200.4065B	65
200.4070B	70
200.4075B	75
200.4080B	80
200.4085B	85
200.4090B	90
200.4095B	95
200.4100B	100



**Material:**

Titanium Ti6Al4V - ISO 5832-3



**/ CANNULATED CLOSURE CAP**

Ref.
200.0001B



**Materials:**

Titanium Ti6Al4V - ISO 5832-3



**/ STERILE GUIDE WIRES SET**

Ref.	L. mm
SE2.S001	350 / 400 / 700 (3 pz.)

**Material:**

Stainless steel

# Elos

## Instruments set

**REF. SE200** - Elos Instrument Case - 1 pc



**REF. SE201**  
T-Handle Chuck - 1 pc

**REF. SE202** - Cannulated Curved Awl - 1 pc



**REF. SE203**  
Reamer Sleeve - 1 pc



**REF. SE204**  
Conical Reamer - 1 pc



**REF. SE205** - 7,0mm Assembly Hex Screwdriver - 1 pc



**REF. SE206A** - Nail Introducer - 1 pc



**REF. SE206B** - Nail Holding Screw - 2 pcs



**REF. SE207** - Strike Rod - 1 pc



**REF. SE208A** - Targeting Arm Body - 1 pc

**REF. SE208B** - Targeting Arm/Introducer Connecting Screw - 2 pcs

**REF. SE208C** - Cannula Locking Screw - 1 pc

**REF. SE208E** - Targeting Arm Washer - 2 pcs



**REF. SE210** - Cephalic Screw/Drill Guide - 1 pc



**REF. SE211** - Ø3,0mm Cephalic Wire Sleeve - 1 pc



**REF. SE212** - Cephalic Screw Ruler - 1 pc



**REF. SE213** - Adjustable Step Drill - 1 pc



**REF. SE214** - Ø3,0mm Anti-Rotation Wire Guide - 1 pc



**REF. SE215** - Cephalic Screw Wrench/Compressor - 1 pc



**REF. SE216** - Cephalic Screw Compression Pin - 1 pc



**REF. SE217M** - Set Screw/End Cap Flexible Screwdriver - 1 pc



**REF. SE218** - Diaphyseal Screw Guide - 2 pcs



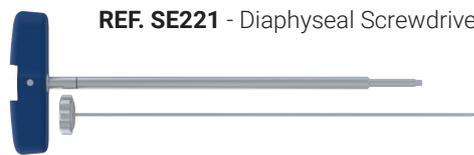
**REF. SE219** - Ø4,2mm Diaphyseal Graduated Drill Guide - 2 pcs



**REF. SE220** - Ø4,2mm Drill Bit, 320mm - 2 pcs



**REF. SE221** - Diaphyseal Screwdriver - 1 pc



**REF. SE222** - Ø4,2mm Drill Bit, 220mm - 1 pc



**REF. SE223**  
Freehand Screw Gauge - 1 pc



**REF. SE225** - Anti-Rotation Screw Ruler - 1 pc



**REF. SE229A** - 240 & 300mm Nail Targeting Arm - 1 pc



**REF. SE235** - Compression Rod - 1 pc



**REF. -SE20** - Elos Instruments set

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